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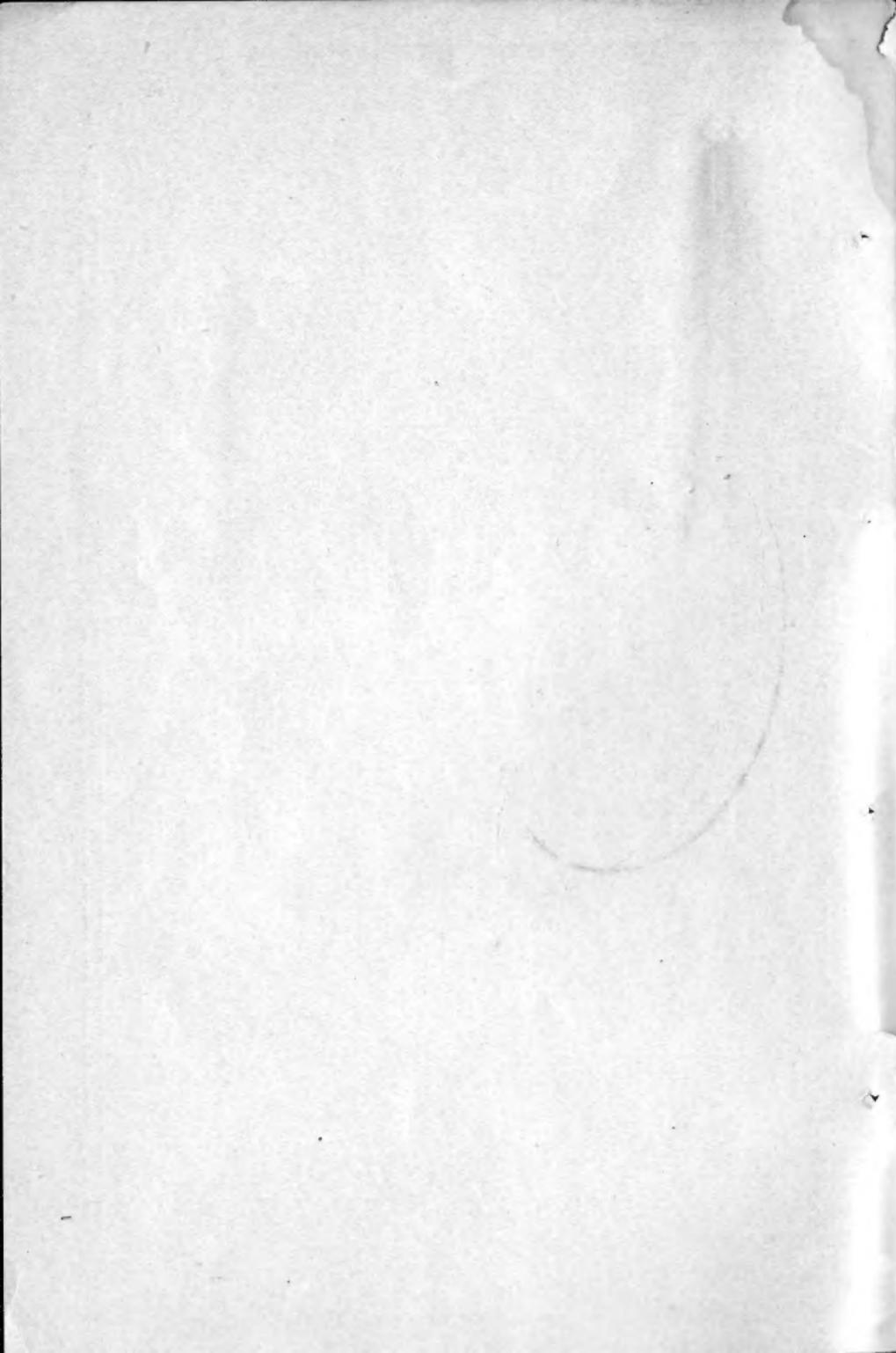
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Catalogue
1903
OF
GROFF'S
NEW
Hybrid Gladioli

TOGETHER WITH OTHER VARIETIES
OF ACKNOWLEDGED MERIT.

ARTHUR COWEE

MEADOWVALE FARM, BERLIN, N.Y.



SPECIAL ANNUAL CATALOGUE

OF

GROFF'S NEW HYBRID
GLADIOLI

Winners of Sixteen First Awards at Pan-American Exposition,
Buffalo, New York, 1901,

ALSO

OTHER VARIETIES OF

DOMESTIC AND FOREIGN ORIGIN
OF ACKNOWLEDGED MERIT.

Selected and Grown by

ARTHUR COWEE

Meadowvale Farm, Berlin, N. Y.



INTRODUCTORY.

WITH the view of giving the amateur a decided advance in quality and value, all sales will be made from the following lists.

Comparison with the varieties, sections and strains, will convince experienced growers that the increase in value and quality is far in advance of the prices charged, and the discarding of older varieties and strains that have not stood the test of competition is in the interest of the grower, and save him the cost of selection. The World's Best Seedlings are the coming strain of commerce, and never fail to give satisfaction.

The New Hybrid Seedlings, having been disseminated by me for some years, are now the leading stock of commercial growers. This strain defeated the whole Childs section, with all its reserve of unintroduced quality, at New York in August, 1900.

Selected, Dark, White, Light and Yellow; and Blue Hybrids, will be prepared in better value than ever.

The leading novelty of this list is Groff's Gold Medal Pan-American Exposition Collection, made up of the choice varieties exhibited at Buffalo in 1901. No such collection was ever offered before in the world, and cannot be obtained elsewhere. In its preparation expensive named varieties are used, without regard to their cost or value, and hundreds of new varieties practically unknown; such diversity, quality, and value, was never before offered in any list in commerce.

"Whatever success I have been permitted to achieve as the result of my labors, are gains to the world and to civilization; they are new creations, evolved from nothing; their original parents being simply weeds, in the eyes of the refined admirer of beautiful flowers. And like the product of the miner's toil, they are drafts upon the great treasure house of Nature, wronging and robbing no one; unlike the results of speculative competition, those mere exchanges of wealth too often be-sprinkled with the tears of the widow and the orphan, or even the successes of legitimate commerce, seldom attained without grinding competition, involving the very life-blood of struggling man."

H. H. GROFF, before Provincial Association.

* * * * *

Buffalo, Sept. 25th, 1901.

"I have been an interested observer of the work of Mr. Groff during the past ten years, and it is particularly worthy of commendation. His display of hybrid Gladioli at Buffalo is wonderful, and it is safe to say that the *named varieties* of five years ago sink into insignificance when placed alongside of his seedlings. Mr. Groff's Gladiolus exhibit is worth a visit to the Pan-American. It is at once an object lesson and an inspiration."

—PROF. JOHN CRAIG.

* * * * *

Cornell University, Ithaca, N. Y.

(Extract from personal letter from Superintendent William Scott, Department of Floriculture Pan-American Exposition.)

"And so ends the wonderful exhibit of Gladiolus which you have made for us at the Pan-American Exposition. To say that your display has been a great attraction for the past two months does not begin to express what your display really has been. It has been the star feature of our horticultural exhibits, and from the expressions that I have heard from hundreds of visitors it has been one of the greatest attractions of the whole Exposition."

—WILLIAM SCOTT

* * * * *

From Luther Burbank, to Mr. H. H. Groff:

"I have watched your progress with the Gladioli, especially at the Pan-American, etc., and am delighted you have made such a glorious success of it. With the many discouragements of Plant Originators there is plenty of silver lining sooner or later."

Santa Rosa, Cal., Jan. 2, 1902.

THE GLADIOLUS.

A search, be it ever so painstaking and complete, of the floral kingdom, will discover no flower of such easy culture, embracing the great range of color with endless combinations and variety, to equal the Gladiolus. Although called the people's flower, it to-day is practically unknown to both the amateur and average grower, and I claim for the newer hybrids greater beauty and more exquisite coloring than in any other garden ornament. Even the orchids fail to equal it, excepting in durability as a cut flower, and here the Gladiolus excels all others.

For the best results, cut the spike when the first flower opens and bloom in the house. This treatment is also beneficial to the bulb.

Varieties of the Gladiolus are now numbered by thousands, but comparatively few possess sufficient vitality to reproduce characteristic flowers; the same may be said of self-fertilized seedlings. This makes my selected collections of special value and advantage to the buyer, and not afforded by any other grower. The process of selection also assures the best possible results in the hybridized seedlings listed herein.

In this catalogue is presented to the progressive amateur, as well as the scientist, the most valuable varieties, collections and mixtures offered in the world. They are selected with the view of giving the critical grower unequalled value and satisfaction.

The only bulbs, blooming size, sent out are first quality old, and strong bulbet grown. The latter are the best value and produce the finest flowers this season and next. These and smaller sizes are kept for my own growing, in preference to the largest matured corms. No second size or cull old bulbs are sent out at any price—they never give satisfaction.

The brief cultural instructions condensed herein are sufficient for general use. Special conditions of soil and climate should be made the subject of correspondence.

Extract from Florist Exchange, Sept 20th.

"We now understand that crossing is good for the species; because it constantly re-vitalizes offspring with the strongest traits of the parents, and ever presents new combinations. But crossing alone can accomplish comparatively little, the chief power in the progression of plants is selection; the force which augments, develops and fixes types, and we must constantly select the best, in order to make any advancement."

—BAILEY.



"You will expect me to speak to you to-night of that borderland of mystery, where man is permitted to join hands with the Great Creator of the Universe in guiding those forces of which he knows so little; until the highest flights of human fancy, picturing seeming impossibility, in exquisite beauty and never ending variation in form and color, sink into comparative insignificance, as the veil is slowly lifted before our expectant and wondering gaze."

H. H. GROFF, before Waterloo Horticultural Society,
and Provincial Association of Fruit Growers.



"Varieties improved from man's point of view must receive kind treatment and richer food than wild forms of the same plant. The cultivated plant, like the domesticated animal, yields in a measure its powers of self-defense to adapt itself to our service. Man must in return provide for its safety and nourishment. In the improvement of plants the action of man, much like influences which act on plants in the wild state, only brings about slow and gradual changes, often scarcely noticeable at first. But if the first efforts toward the desired end be kept on steadily, the changes will soon become greater and greater, and the last stages of the improvement will become much more rapid than the first one."

—VILMORIN.



"Without the resolution in your hearts to do good work so long as your right hands have motion in them, and to do it whether the issue be that you die or live, no life worthy the name will ever be possible to you, while in once forming the resolution that your work is to be well done, life is really one, here and forever."

—RUSKIN.



"We are now standing just at the gateway of scientific horticulture—only have been a few steps in the measureless fields, which will stretch out as we advance into the golden sunshine of a more complete knowledge of the forces which are to unfold all the graceful forms of garden beauty and wealth of fruits and flowers."

—BURBANK.

PAN-AMERICAN EXPOSITION

BUFFALO·NEW YORK·A.D 1901



The Director is on the
recommendation of the Subscribers
and the Board of Managers
of the Pan-American Exposition

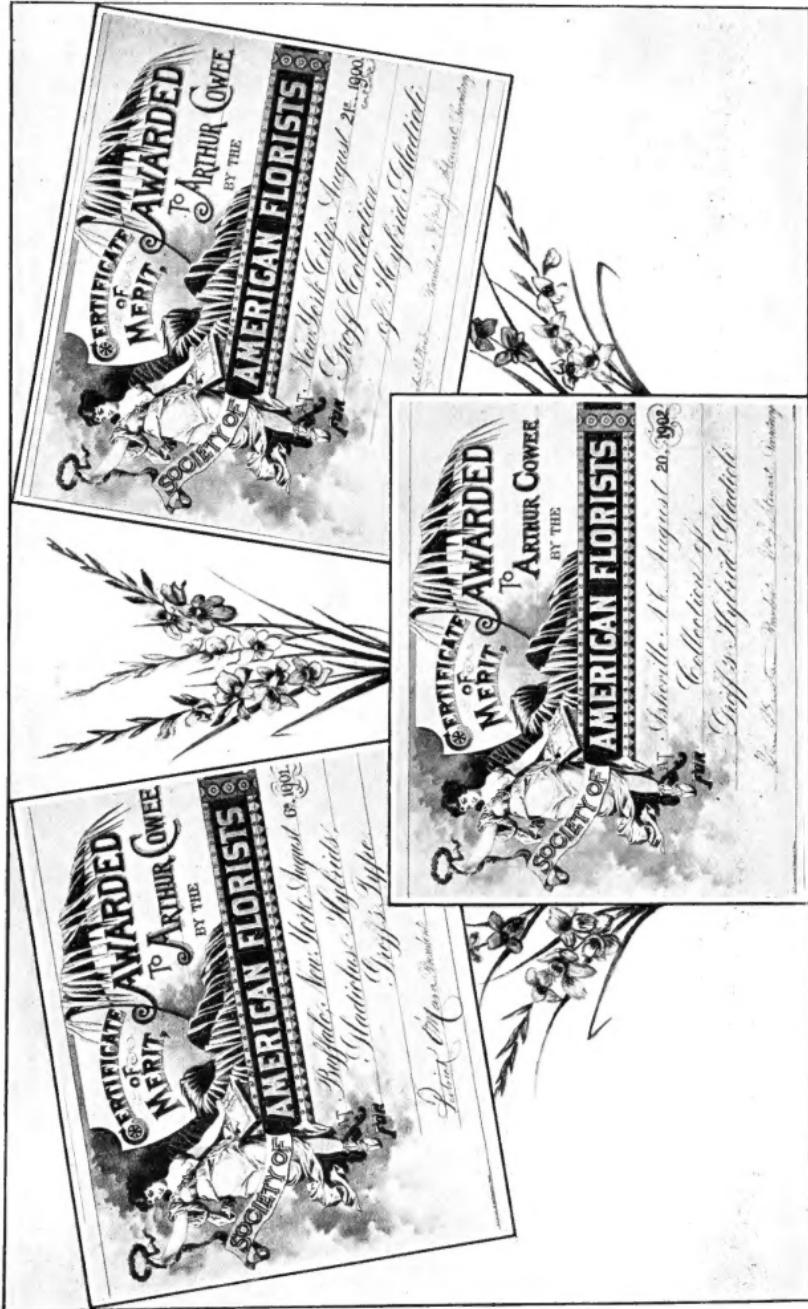
A GOLD MEDAL,

to
H. H. Smith
for
Stachys

John A. G. M. (President)
Alice Fleming (Secretary)

John A. G. M.
Alice Fleming
Secretary





GROFF'S EXTRA SELECT PAN-AMERICAN EXPOSITION COLLECTION.

THE GOLD MEDAL COLLECTION.

This collection is made up from the choice, new varieties exhibited at Buffalo in 1901, and contains varieties of such high proven quality that no grower, however critical, can wish for better value.

In its preparation, over 600 named varieties have been discarded, and every desirable section known is represented—Gandavensis, Lemoine, Nanceianus, Blues, and New Hybrids. It contains no Childsi, this section having been defeated at home in New York by my earliest original work, no part of which enters into the composition of this grand collection—my New Hybrids being of later origin and unknown to commerce.

In this collection the Whites, Lights, and Yellow shades are of the purest colors obtainable, relieved in many varieties by stains and blotches of most intense and decided contrast.

The Pinks, Reds, Scarlets, Crimsons, and Cerise shades are of the highest quality, with flowers of the largest size and greatest perfection.

The New Blues, including tints of Lilac, Heliotrope, and Clematis, were never before offered in mixture.

All the above are in endless combination, embracing the best production of the purest and most delicate tints, as well as the most brilliant and striking contrasts of intense and vivid colors, practically unknown commercially.

The flowers are of the largest size in their respective types, the spikes of correct form, with plants of exceptional vigor and vitality.

This new collection is the best and latest products of years of costly effort and the result of scientific hybridization from the most valuable material the world has known. It is prepared specially with the view of providing the amateur with a typical collection of the Modern Gladiolus. No such was ever before offered, and no better value can be desired.

Offered in lots of 25, 50, 75 or 100 corms, or upwards. Every collection separately prepared. So great is the diversity of this excellent collection that the purchasers of 1,000 corms will get few duplicates.

Price per 100, - - - - - \$15.00.

"An occasional and slight change in the conditions of life is beneficial to all plants and animals; but the offspring from a cross between organisms which have been exposed to different conditions profit in an incomparably higher degree than do young or old beings from a mere change of their conditions."

—DARWIN.



"We believe in specialists; the man who gives a large amount of his time to one thing learns more about it, and obtains a higher standard than is possible to those who have many irons in the fire.

When a man is familiar with the best that has been produced by others, he is qualified to pass judgment upon anything in that line. He knows what has been done, and what is necessary to improve it—his standard is high."

—M. CRAWFORD.



"Although it is well known that selection is the great force in improvement, too many professional growers are content with selecting the seed parent only; and the credit they would like to take for this care and enterprise would make them the subjects of ridicule with those who are improving by selection all useful forms in the animal kingdom."

H. H. GROFF, before Waterloo Horticultural Society and Provincial Association of Fruit Growers.



"Limitations once thought to be real have proved to be only apparent barriers; and as in many of the dark problems of nature, the mental light of many ardent, persevering, faithful workers will make the old paths clear, and boundless new ones will appear by which the life-forces are guided into endless, useful, and beautiful forms."

—BURBANK.



"It is my belief that the art of cultivating flowers must be regarded as none the less important than the art of sculpture or painting, because the flowers form the most beautiful part of nature."

—HENRY IZAWA.



(*From personal letter by Mr. A. T. De La Mare, publisher of Florist's Exchange, New York, who inspected the exhibit.*)

"We are glad to see that you have done so well at the Pan-American Exposition in medals, certificates and prizes; this is a splendid record well earned and well deserved."

—A. T. DE LA MARE.



"As civilization progress higher and higher, the human taste for beauty and fine arts improves more and more, and I believe that the time may come when the world of beauty will entirely fall into the hands of those who are exponents of Nature."

—HENRY IZAWA.

GOLD MEDAL AND SILVER TROPHY STRAINS.

GROFF'S "WORLD'S BEST" NEW HYBRID SEEDLINGS.

1—NEWEST REDS, SCARLETS, AND CRIMSONS. The world's commercial strains, offer few equal and none better (they should be largely planted).

Per 100, - - - - - \$4.00.

2—NEW WHITE, LIGHT, AND YELLOW. All shades of white, cream, and yellow, in many combinations, relieved by stains and blotches of rich colors in most pleasing contrasts.

Per 100, - - - - - \$5.00.

3—RARE BLUES, IN CLEMATIS, LILAC, AND HELIOTROPE SHADES. New Hybrids of Papilio Major, practically unknown. No such seedlings offered elsewhere in the world.

Per 100, - - - - - \$5.00

Large blooming bulbs, the only size offered. Possible variation in colors as above classified, due to out-crosses, will be covered by extra count in filling orders.



GROFF'S SPECIAL SELECTIONS.

These special selected collections of New Hybrids are prepared from the cream of the world's named introductions, in Gandavensis, Lemoine and Nanceianus after discarding over 600 named varieties, and some also include choice new tested seedlings of equal or greater merit.

1—SELECTED NEW DARK HYBRIDS. All shades and combinations of red, scarlet, and crimson, of highest quality.

Per 100, - - - - - \$12.00.

2—SELECTED NEW WHITE, LIGHT, AND YELLOW HYBRIDS. No equal value offered elsewhere or otherwise obtainable.

Per 100, - - - - - \$18.00.

3—SELECTED NEW BLUE HYBRIDS. Not offered elsewhere in the world (no smoky or slate blues).

Per 100, - - - - - \$18.00.

Large blooming bulbs, the only size offered.

Extract from California Floriculturist.

"The new shades, such as blues and purples, shown in Gladiolus by Messrs. Groff and Cowee, created a great sensation at the Pan-American.

Some of these Gladioli were grown at Singleton Court in Los Angeles during the past summer, and all who saw them were free to admit that for range and rarity of color, they were the finest ever seen in California."



All of my Gladiolus disappointed me the past season, as the hot wave struck them at the end of June. They had just pushed out their flower spikes, and were all so badly scorched by the hot sun, that none showed up well. Several of yours came out later, and under the adverse condition must say they were fine indeed. I will want more bulbs next spring, so please mail me your catalogue as soon as it is published.

ILLINOIS.

HENRY C. ECKERT.



On the Blues and Lights I cannot report, as they were in bloom while I was at the Pan-American. The Reds planted ten days earlier, gave me some fine colors, the equal of anything that has come to me from the Continental lists.

VERMONT.

D. C. HICKS.



GROFF'S NEW HYBRID GLADIOLI IN NEW ZEALAND.

"In the opinion of experts on the matter of hybridizing the Gladiolus, Mr. Groff, of Simcoe, Canada, stands foremost in the world at this work."

WAIKATO ARGUS, New Zealand.



"Sunset Magazine," San Francisco, June, 1902.

"Mr. Groff is the leading American specialist in the Gladiolus."

PROF. WICKSON, University of California, on Luther Burbank.



Regarding stock purchased from you, to say that I was pleased is stating it mildly. The colors were so varied that they would have been interesting had they no beauty of color. I hardly know what to say of them in detail as many of each color class are worthy of a description for each spike. I picked pollen from the White Lady, and pollenized to florets on a spike of one of yours, the largest Gladiolus I ever saw. This spike grew four and one-half feet high, and flowers were correspondingly large.

CALIFORNIA.

ERNEST BRAUNTON, Editor.

GROFF'S HYBRID SEEDLINGS.

THE MOST POPULAR STRAIN IN AMERICA.

The original introductions of Mr. Groff awarded certificate of merit by Society of American Florists, New York, 1900, where they defeated the whole Childsi section exhibited in competition by the introducer.

In this section I control over 75% more of the varieties comprising this strain than any other grower, in fact the whole of this important introduction is in my hands including every variety offered by all other growers.

Large Blooming Bulbs, price per 100	- - - - -	\$ 3.00
Large Blooming Bulbs, price per 1,000	- - - - -	25.00
Small Bulbs, $\frac{3}{8}$ to $\frac{5}{8}$ -in. diameter per 100	- - - - -	1.00
Small Bulbs, $\frac{3}{8}$ to $\frac{5}{8}$ -in. diameter per 1,000	- - - - -	7.50
25 at 100 price.		



COWEE'S SPECIAL COLLECTIONS AND MIXTURES.

"COWEE'S MIDWAY COLLECTION."

This collection is specially prepared as an intermediate or midway section between the new Gold and Silver Trophy strains of Pan-American celebrity, and those of a popular character following, all in high types of commercial value.

It is prepared from all sections in new named varieties of European origin which until the introduction of Groff's Gold and Silver Trophy strains at Buffalo have led the world, also a few of the earlier introduction of Groff Hybrids. It will be found of exceptional value, quality and diversity.

Price per 100,	- - - - -	\$5.00
25 at 100 price.		



COWEE'S "BUFFALO" MIXTURE.

This is a strain composed entirely of selected named varieties, Mr. Burbank's California Select. Mr. Gray's Ingleside Hybrids and named Childsi.

Price per 100,	- - - - -	\$4.00
25 at 100 price.		

(Extract from American Gardening of Aug. 24th, 1901, on Pan-American
inside Floral and Plant Exhibits.)

Let us now mention the star attraction of the Horticultural Building, namely Groff's Hybrid Gladiolus. Mr. Groff has been working for fifteen years as a hybridist, working consistently with the various species of garden hybrids, looking mainly for substance in the petals, or as he defines it, resistance, in order to suit our climate, and this together with gaiety of color. All these qualities he has certainly secured and for the past three weeks has kept up an exhibit of over ten thousand varieties of unnamed seedlings. Supt. Scott informs us that a certain lady who was worked up over the grandeur and excellence of this exhibit that she hastened at once to the telegraph station and sent this message to a friend: "Come to the Pan-American; the Gladiolus are worth the journey alone." And at this we are not surprised, for to the lover of garden plants a strange fascination centers at this exhibit.* The different batches of seedlings as they come at different dates show the blood of different parents. For instance, the first day it was our privilege to see the display, the Lemoine types in light colors were most conspicuous. Later Nanceianus and Gandavensis influences were more in evidence, and in deeper colors; but when we mention color we are at a loss to faithfully describe anything that is to be seen here, as the range is from blue to white, including brilliant yellows and deepest crimsons. As an evidence of the staying qualities of these hybrids, we are privileged to receive from Mr. Groff about thirty kinds on Saturday which were brought to New York after being on exhibition, and they were yet in good condition on the Tuesday following. We take this opportunity of congratulating Mr. Groff on the great success which he has attained after fifteen years of laborious work. His associate in the United States is Mr. Arthur Cowee, of Berlin, N. Y., who has twenty-eight acres planted (this year, 1903, seventy-five acres), and will be some weeks later in securing bloom, by which means it is expected to have the display kept up until very late in the fall.

JAMES W. WITHERS.



I found the Groff's Hybrid Seedlings, purchased from you last April, blossomed unusually well for small bulbs, and with a rich variety of color. I was surprised at their vitality. I shall want more seedlings next year. Kindly send me your next catalogue.

NEW YORK.

BENJAMIN DURHAM.



I had the best blooms, and richest colors I have ever seen from Gladioli bought from you last spring.

PENNSYLVANIA.

R. F. SHANNON.



FROM "THE GOLD MEDAL AND SILVER TROPHY STRAIN," SECTION ONE.



FROM "THE GOLD MEDAL AND SILVER TROPHY STRAIN." SECTION TWO.

COWEE'S "NIAGARA" STRAIN.

This mixture is prepared for the use of those who need large quantities at reasonable prices.

It contains named white, light, yellow and variegated types of American Hybrids, and named Childsi. It is sure to give satisfaction.

Price per 100, - - - - - \$3.00
25 at 100 price.



MISCELLANEOUS SORTS.

	Per 1000
Mixed Childsi per hundred, \$1.75.....	\$15 00
Burbank's California Select per hundred, \$4.00.....	35 00
Smoky and Slaty Hybrids per hundred, \$3.00.....	25 00
Meadowvale Mixture, 1st size.....	10 00
Meadowvale Mixture, 2nd size.....	7 50
White and light shades.....	12 00
Pink Shades.....	10 00
Scarlet and red shades.....	7 00
Orange and Yellow.....	25 00
Striped and Variegated.....	18 00
Extra Fine Mixed Lemoine.....	15 00
Fine Mixed Lemoine.....	10 00

25 at 100 price.

250 at 1,000 price.



NAMED GANDAVENSIS AND OTHERS.

	Per 100	Per 1000
Augusta	\$6 00	\$50 00
Brencheleyensis	75	6 00
Canary Bird.....	8 00	
Ceres	1 00	8 00
Chamont	5 50	
Delicatissime	3 50	
Eugene Scribe.....	5 00	
Fatma	3 50	
Isaac Buchanan.....	2 50	22 00
John Bull	2 00	16 00
"1900"	2 50	20 00
Madam Monneret.....	1 25	10 00
Martha Washington.....	4 00	
May	2 00	18 00
Shakespeare	5 00	
Marie Lemoine.....	2 00	18 00

25 at 100 price.

250 at 1,000 price.

*Extract from the Forest Exchange (an unquestioned authority) of issue
Sept. 20th, 1902.)*

The Meadowvale Farm of Arthur Cowee, of Gladiolus fame, is situate in the hamlet of Berlin, N. Y.; and, although somewhat removed from regular roads of travel, the Gladiolus industry is an attraction that brings many flower lovers to Berlin during the plant's flowering season.

It was our privilege on the first of September to ramble over the fields, and note the Gladioli in their many different hues; and, although it was perhaps a week or ten days too late for the fields to be viewed at their best, the sight presented was well worth the journey.

As is well known, the varieties of Gladiolus grown here are principally those now known to the trade as Groff's Hybrids. When we entered the field it was our intention to note and try to describe some of the newer creations; but the varieties are so multitudinous, and of such excellent merit generally, that they can only be referred to in sections; and we can now easily appreciate Mr. Groff's system of refraining from naming his varieties. There are so many that would be worthy of a name, should that system be adopted, that it would be impossible to find appellations for them all.

Before entering further into the subject, we ought to say that Mr. Cowee is a life-long enthusiast on Gladiolus, and for the past ten years he has been growing them extensively. Now, ten years' cultivation and close observation of any one particular flower must necessarily give one a fair understanding of the subject in hand, and although all the new European varieties are grown and tested carefully, as well as the several well-known American strains, Mr. Cowee does not hesitate to say that Groff's Hybrids lead all others. To some that may seem a very broad statement, as there are now several other beautiful types of Gladiolus that are well-known commercially; but if we look closely into the matter we must admit that Mr. Cowee is justified in his opinion. Let us take diversity of color, for instance. There was one block of a light-colored section—probably about two acres. We cut fifty spikes indiscriminately from the ends of the rows nearest the path. When these fifty spikes were closely examined it was found that there was only one duplicate among them. All were light colored in the strictest sense of the word; and, excepting one, they were all dissimilar. In that block there were at least 500 different varieties. So much for color variation.

With respect to constitutional vigor, this is perhaps their very strongest point. When seen growing in close proximity to other strains, Groff's Hybrids all flower, and every bud will open and fully develop. It is also very noticeable that the very small bulblets, or cormels, of these hybrids have a propensity for flowering while very young; of one block of such cormels that, when planted, were from $\frac{3}{8}$ to $\frac{5}{8}$ of an inch in diameter, 90 per cent. had flowered.

CONCLUDED ON PAGE 20.

CULTURAL DIRECTIONS.

Plant in full exposure to the sun, in any well enriched garden soil, avoiding contact with manure, which should never be fresh. Where soil is stiff clay, fill the drill with sandy loam—water when necessary during the early stages of growth and again when buds show color. The bulbs may be planted in double rows, two inches apart in a four inch drill, two, three and four inches deep, according to size. Here we plant from the middle of April to the middle of May, and with all sections and sizes, bloom is continuous from the end of July until frost.

Before the ground freezes, dig up the bulbs, cut off the stalk close, and store in a cool, dry place. The old bulb, or more properly speaking, corm, may be removed a few weeks later when convenient. The process of acclimation of foreign varieties is not only an advantage to the grower on this continent but the beneficial effects of culture in our stimulating northern atmosphere will be more apparent when the bulbs are developed in the more genial and humid climates of our Southern and Middle States.

Those who fail to succeed with stock furnished by me will please report the same; and if due to any cause under my control, I shall be glad to make it good, as, before increasing the number of my correspondents, it is my wish to assure satisfaction and value to those who have favored me with their orders. Satisfaction is guaranteed as to quality of stock furnished. No guarantee other than that stock is true to name, is given as to results, these being practically under the control of the grower.



REGARDING GLADIOLUS SEED.

I have many applications during the season for Gladioli seed. This we do not sell for several reasons, the two principal ones of which are as follows:

First. The seed from which our new varieties are produced, is hand hybridized and grown by Mr. H. H. Groff, at Simcoe.

Second. The growing and flowering of bulbs from Gladioli seed is a delicate and tedious task, and there are few whose experience and patience would be proportionately rewarded by the results.

It is more satisfactory and economical to buy well established bulbs produced by scientific hybridizing with a thorough knowledge of the parent plants.

Another feature that points towards exceptional vigor is the freedom with which the plants produce their cormels; with no other varieties, as grown here, can there be so rapid an increase from parent stock.

It has been remarked that the Gladiolus is most useful as a cut flower, and that is, or should be, its proper sphere. That the demand for it as a cut flower is increasing each year is a fact, though city florists have ideas to the contrary. It must be remembered that while city florists are enjoying their dull season, the Summer resorts are in full swing and the Gladiolus is in the height of its beauty. It is from the latter places that the chief demand comes, and until there is some flower grown that can be had cheaper and will last longer the Gladiolus will reign supreme and the demand for it will increase year by year.

To accommodate the immense number of corms through the Winter season large storehouses are necessary. Mr. Cowee has two of these houses on the farm, each 96x27 feet, and two stories high, piped for heating, and lighted with electricity.

Besides lighting the establishment with electricity, Mr. Cowee has his residence fully lighted (some 27 lamps are in use) by this illuminant.

There is also a saw-mill where the boards for all his crates are sawn from logs.

His brother, W. J. Cowee, has here several machines making wired tooth-picks, and the power is derived from a small stream of water which flows from the reservoir built for irrigation purposes. Incidentally, there has been no need for irrigating the Gladiolus fields this year.

Before concluding, we must remark that Meadowvale Farm is an ideal place to spend a Summer's day. The beauty of the Gladiolus fields, and the genial hospitality of Mr. and Mrs. Cowee make the visit one to be long remembered.



The bulbs received from you last spring arrived in good condition, and we got fair results from them, in spite of the very dry weather which we have experienced through this section this year. We were very much pleased with the flowers from these hybrids.

IOWA.

E. M. SHERMAN.



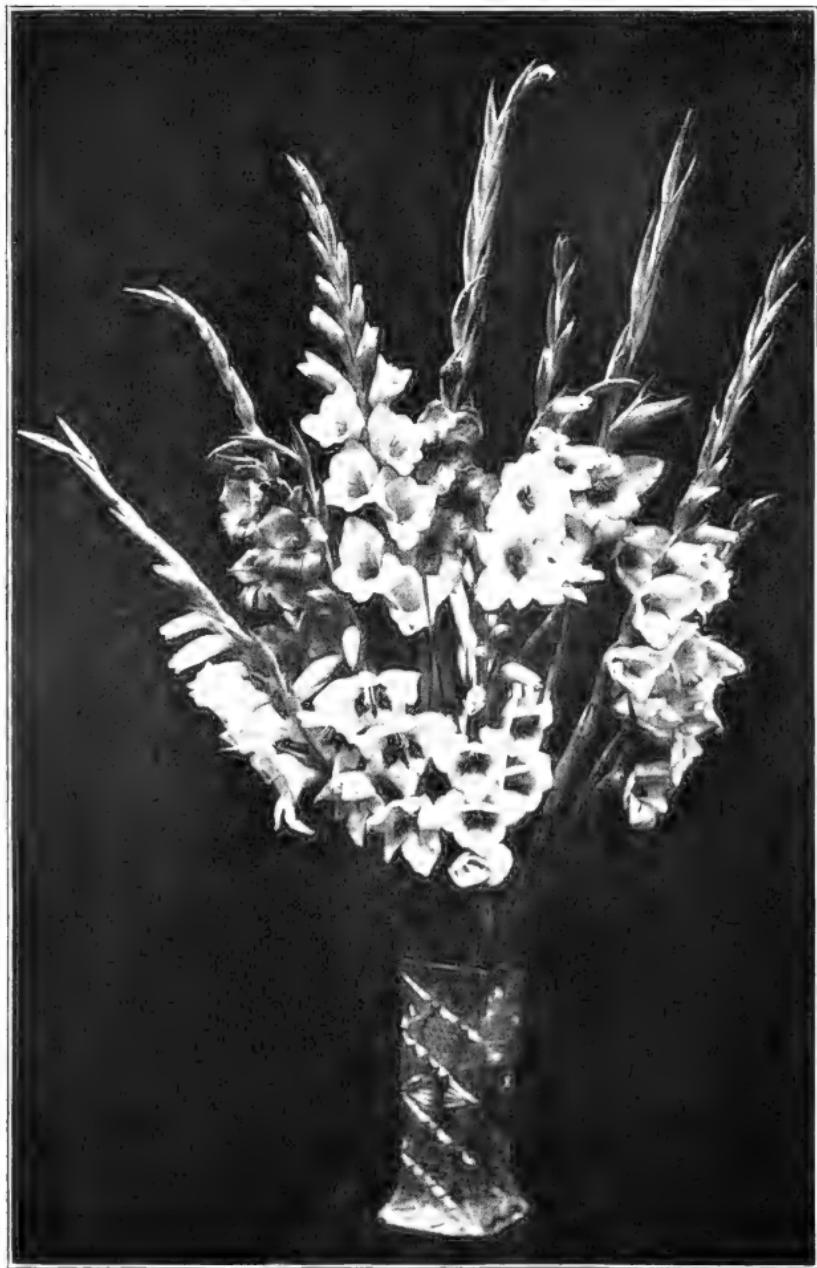
The Groff's Hybrids I had of you last spring gave the best results of any bulbs I have yet used. The flowers were beautiful; the finest Gladioli I have ever seen. I will want some more next spring. Send me a catalogue.

NEW YORK.

FRANK C. HERRICK.



FROM "THE GOLD MEDAL AND SILVER TROPHY STRAIN," SECTION THREE.



FROM "GROFF'S HYBRID SEEDLINGS."

A FEW DON'TS.

DON'T think that in ordering a few bulbs you will compass a wide range of varieties, for we have over ten thousand. We do claim, however, that even in small quantities, you will secure a larger variety of high quality, than in any other stock offered at the same, and higher prices.

DON'T, whether you buy our stock or that of others, pick out the largest bulbs from a collection or mixture, and imagine you have the best quality, for by so doing, you may eliminate from your purchase, varieties of high quality which never produce large bulbs.

DON'T, if you have been led into paying high prices for medium and poor quality under high sounding names, fail to give our stock a trial order. Compare quality and prices, and select from the stock, and secure at small cost, if you wish, a collection of greater value than is possible under the obsolete naming system.

All stock herein offered, is subject to prior sale, and orders received are not binding until accepted in writing.

In filling orders, no substitutions will be made unless so instructed. Stock for greenhouse forcing can be shipped in the Autumn after the bulbs are thoroughly cured.

Special discount to seedsmen, or to those ordering in lots of ten thousand or more.

Our fields, which will be more extensive and beautiful this year than ever before, are near the railroad station and during the blooming season (July to October) I shall consider it a pleasure to receive and show visitors through them.

Parties contemplating a visit should advise me a day or two in advance.

ORDER EARLY.

Every season, orders reach us too late to be properly executed, on account of the required early planting of some very late flowering varieties.



DIRECTIONS FOR ORDERING.

CAREFULLY SIGN YOUR NAME, POST OFFICE, COUNTY AND STATE.

Remittances should accompany all orders from unknown purchasers, and may be made by post office order, express order, New York draft, or cash by registered letter. Postage stamps accepted as cash.

During the blooming season, usually between July 25th and frost time, I can furnish cut spikes of superior flowers in large or small quantities, and shall be pleased to quote prices upon application.

Address all orders to ARTHUR COWEE, Proprietor,
Meadowvale Farm, Berlin, N. Y.

EXPERIENCE WITH GROFF'S GLADIOLI.

To the Editor of American Gardening:

No doubt thousands of your readers saw and admired the magnificent display of Groff's Hybrid Gladioli that for many weeks was one of the most attractive features of the Horticultural Building at the Pan-American Exposition, and it may interest those who contemplate trying them another season to learn how they behave in the hands of an amateur grower. Last spring I secured a thousand bulbs of the Groff Hybrids from Mr. Cowee, of Berlin, N. Y., who is Mr. Groff's sales agent in the States. The shipment arrived rather late in the season, and, my garden space being pretty well occupied, I was obliged to plant the bulbs very closely together. I gave them a thoroughly enriched soil, however, and, notwithstanding their crowded condition, they produced a growth of surprising vigor. I think that nearly every bulb gave me at least one fine spike of bloom and many of them two or three. And such an infinite variety of brilliant shades, tints and colors can only be imagined by those who have seen the Groffs grown at their best. They lasted for several weeks and were extravagantly admired by all who saw them.

Nor is this all. No genuine lover of this popular flower need be told that one of the principal joys of Gladiolus culture is the digging of the bulbs in the fall and ascertaining how much, if any, his treasures have increased. I have just dug my Groffs and find that my thousand bulbs gave me a net increase of fully 40 per cent., and the size averages much larger than the original stock. A goodly number of the bulbs produced five, and some of them six, each larger than its parent bulb. It is needless to add that I consider my purchase a most profitable and satisfactory investment.

AVOCA, N. Y., Nov. 5, 1901.

EDGAR A. HIGGINS.



The brilliant coloring of Groff's first section of Gladioli was a great gain over existing hybrids. The seedlings sent me this season were very robust, and show a good advance over the first section. I was particularly interested in the blue and lilac shades.

NEW YORK.

R. R. STOCKDALE, Vice-Pres't.



Relative to the Groff's Hybrids bought of you last spring, this lot of bulbs was planted early, and for that cause made a very favorable showing. Later plantings were a failure, on account of the unprecedented hot weather. Never such extreme heat in this section as this summer. The lot of bulbs referred to made their growth early, and I have some fine ones for next year. Groff's bulbs have always given me more than satisfaction.

INDIANA.

SAMUEL GRONDYKE.

I was very much pleased with the Gladiolus bulbs which I purchased from you last spring, and will say that they were the finest variety ever seen in this section. Evidently my neighbors, and strangers thought so too, for during my absence, they would trail through the rows to get at some particular variety, and tag it. I shall endeavor to see you during the winter, and make arrangements for some bulbs for next season.

MASSACHUSETTS.

W. H. MILLER.



I was very much pleased indeed to receive the paper with account of your splendid success at Buffalo. I have not been to the exhibition, but one of my friends who has watched my Groffs develop, saw your display there and was staggered at the variety and beauty of it all. He says it is much advanced even over my collection of 1899 and 1900, although he thinks some old friends in my garden were there. Well, you deserve success, and I congratulate you most heartily.

COLORADO.

H. E. GATES.



The Groff's Hybrids purchased from you last spring proved very satisfactory. The flowers were extra large, and the great variety of colors was remarkable, hardly any two being exactly alike. A collection of spikes cut from these bulbs, took first premium at Hoosick Valley Agricultural Society's fair held at North Adams, Mass., Sept. 3-5, 1901.

MASSACHUSETTS.

GEO. G. WALKER.



Groff's Hybrid Gladioli were the finest we have ever had, in fact this year we had the finest Gladioli in this section. They were superb, having stems four to six feet in height, in gorgeous colors. I would like to secure some of the reds separate for mass effects for next season.

MAINE.

WILLIAM MILLER.



Mr. H——— has just given me your letter regarding the Gladiolus which I received from you through him. I can only say that they were far ahead of my anticipations, and I have never seen anything in the Gladiolus world that was as beautiful. They attracted much attention, and were the admiration of all who saw them.

MASSACHUSETTS.

FRANK H. DODGE.



The shipment of Groff's Hybrid Gladioli that I received from you last spring were very satisfactory, especially the dark hybrids and light shades. The Colors and markings surpassed anything I ever saw. Mrs. B——— was very much pleased with them.

MASSACHUSETTS.

JOHN L. CHAPMAN, Gardener.

The Groff's Hybrids you sent me last spring, proved to be all that you claimed for them. Notwithstanding the long and severe drouth we had here, the blooms were large and perfect, and the colors were fine.

Had we a favorable season, there is no doubt but what they would have done much better. Would also state that the "Meadowvale Mixture" sent at the same time, was the best I have ever bought in mixture, and I was both pleased with the bulbs, and your generous manner in filling my order, although a small one.

MINNESOTA.

E. J. FOBES.



The Groff's Hybrids you shipped me last spring proved very satisfactory, and I was very much pleased with them.

NEW YORK.

H. G. EYRES.



The Gladioli are in bloom, and are a glorious rival to my sumptuous orchids. I need not add that they give me exquisite delight. I think them a wonderful creation, and in form and coloring, cannot be surpassed in Nature's realm. I cannot say enough to let you know how much pleasure I have gotten out of my investment. Now I only wonder what magnificent blooms I have failed to secure, because I did not buy more of them.

CONNECTICUT, Aug. 26th, 1902.

MRS. B. B. T_____.



— I can assure you they are one of the handsomest specimens which ever came to the Catskill Mountains, being admired by everybody, and you certainly deserve credit for your skill and art in producing these Gladioli. The different shades of color and the artistic designs upon them are beautiful. In looking at them, every minute you discover something different, and new in color. Only sorry to state that the pleasure to enjoy them was so short, as the season in the mountains this year was rather poor for flowers.

CATSKILL MOUNTAINS, Sept., 1902.

CHARLES Z_____.



Doctor_____ is very much interested in Gladioli, having about one thousand varieties. He saw those from stock which you sent me last Spring, and he admitted they were the best and finest he ever saw, and wanted to know where I secured them. I wish you would send him one of your catalogues. I have taken so much satisfaction from those grown this season, that I will want quite a lot more, and will send in order early.

MICHIGAN, August 25th, 1902.

J. A. G_____.

As regards the Midway Collection purchased from you last spring, they have bloomed well, and the colors have been fine, and the size satisfactory. Another Spring I shall order more, as I like them better than any bulbs I have had before.

VERMONT, Sept., 1902.

MRS. JOEL H. G_____.



I write to tell you of my beautiful blossoms. I have several of the coveted blues and heliotrope colors, a few dark red, and several oddly marked. I am more than satisfied. I hope to purchase next Spring some of your higher priced bulbs.

NEW YORK, Aug. 24th, 1902.

MRS. L. N. B_____.



Your Midway Collection as ordered by me in early Spring, proved all you claimed them to be, in fact they were the finest Gladioli I have ever had in my collection, and I shall take pleasure in recommending you to friends who desire bulbs of the higher order.

NEW YORK, Sept. 10th, 1902.

E. E. D_____.



I have to report that we had a most favorable season for Gladioli blooms, and having them mulched with straw, I had some of the largest and best Gladioli I ever saw. In quality, the three strains (Gold Medal and Silver Trophy) I received from you two years ago, were the best.

Two bulbs of the first section (Dark shades) produced flower stems that were immense, nearly five feet high, and of such vigor, constitution, and sun-resisting qualities, that I kept them separate to breed up in future, a sun-proof strain.

ILLINOIS, Oct., 1902.

HENRY C. E_____.



While the corms were as you stated, small, they all bloomed. They were not only entirely new varieties to me, but also very beautiful. The individual blossoms on the stalks were large, and although the season being rainy and dark, was not favorable, still I had entirely satisfactory results.

NEW YORK, Sept., 1902.

L. D. C_____.



I am delighted with the Gladioli bulbs, Gold Medal and Silver Trophy Strain which I purchased of you in May. They blossomed finely the last of August, and were exquisitely beautiful, their rich tints rivalling orchids. The blossoms excited the admiration of all who saw them.

I was awarded a special prize for them at our County fair.

NEW YORK, Oct., 1902.

IDA M. B_____.

The Gladioli bulbs I purchased from you last Spring gave the best of satisfaction. They attracted the attention of every one who saw them, for their beauty of color and large spike. You certainly deserve credit for the production of such shades and spikes.

PENNSYLVANIA, Oct., 1902.

FRED H———, Florist.

* * * * *

The Gladioli bulbs purchased from you last Spring being planted so late, all have not yet bloomed. Enough bloomed, however, to win me first premium at our fair. The blue ones are very pretty. They are the only ones of the kind ever seen in our city. If I live, I am so well pleased, that I will buy from no one else next year.

OREGON, Sept. 29th, 1902.

MRS. J. V. T———.

* * * * *

As to the result of the planting of your Gladioli bulbs I will say, that they have far exceeded even our expectations in size, and in every way. They are perfectly beautiful, and have been much admired.

NEW YORK, Oct., 1902.

LORAIN N. D———.

* * * * *

The Gladioli bulbs, Niagara Strain sent by you, have all bloomed. Some were very beautiful, and I would like to have more in the Spring. Others in our neighborhood will want bulbs, as mine were very much admired when in bloom. I had a great many planted, but none as fine as yours.

PENNSYLVANIA, Oct. 25th, 1902.

MRS. J. T. R———.

* * * * *

——— They were all fine (Groff's) far exceeding my expectations. At C——— I made two entries, took first and second premiums. At A——— I made one entry, took first premium there. The judges at A——— say they never saw such quality before. (Gold Medal Collection, and Gold Medal and Silver Trophy Strain.) Nothing for me in the future but the best.

NEW YORK, Oct. 27th, 1902.

CHARLES L———.

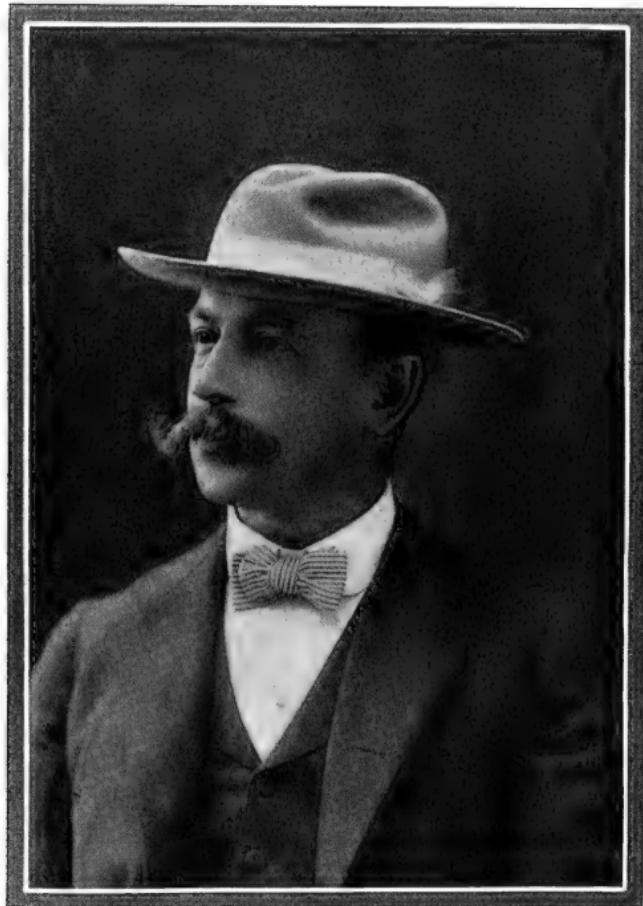
* * * * *

The superb collection of Gladioli which you so kindly presented to me, reached here yesterday, and are in prime condition. I have spent every moment since trying to name, photograph, and record the color of as many specimens as possible. Some of them are known to us, but the magnificent blues and purples are entire strangers. How shall we name them? * * * * Thanking you most heartily for the handsomest collection of flowers I have ever seen at one time, I am

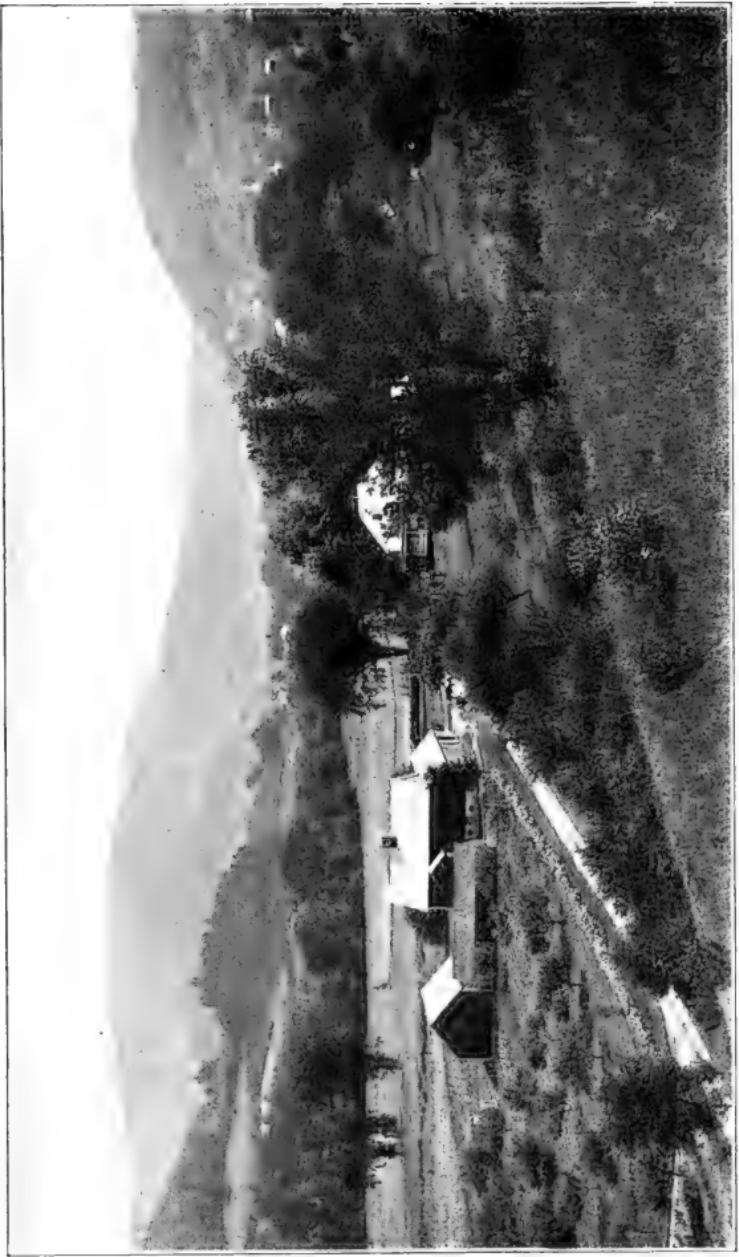
Very sincerely yours,

NEW YORK, N. Y., Aug. 20th, 1902.

A. S. VAN B———.



THE GROWER, MR. ARTHUR COWEE.



LOOKING ACROSS THE SOUTH HALF OF MEADOWVALE FARM TOWARD THE VILLAGE OF BERLIN, N.Y., WHICH IS SITUATED ON THE CHATHAM DIVISION OF THE RUTLAND RAILROAD, ABOUT 150 MILES DUE NORTH OF NEW YORK.

THE MODERN GLADIOLUS.

THE VARYING QUALITY OF ADAPTABILITY IN HYBRID TYPES.

(Second Article by H. H. Groff.)

The object of these articles is to show the absurdity of attempting to limit the dissemination of high class hybrid Gladioli, by the annual introduction of a few named varieties, produced for the purpose of serving an expensive and unsatisfactory system, that must soon be obsolete so far as the Gladiolus is concerned.

If wild species cease to be what they were for hundreds of generations so soon as they are placed under conditions of changed nutrition, and if domesticated species only retain their characteristics so long as the conditions under which they have been bred continue to exist, what reason have we to hope that the less staple hybrid types will repeat their satisfactory performance at the point of production, in many different places and under endless diversity of condition and treatment—they do not, and they will not—therefore, the more we limit the production of hybrids, the more we lose in value and satisfaction.

If we must accustom ourselves to consider species as nothing but temporarily established equilibriums, and this under given conditions of soil, climate and environment, producing the more or less stable equilibrium between vital forces; on what grounds can we promise definite results from unstable hybrid types in ten thousand homes, spread over two hemispheres—we cannot and should not.

In view of these admitted conditions may I not deserve to claim the consideration and approval of all growers of hybrid Gladioli, for the enormous multiplication of well-balanced types of the choicest breeding the world has known, in the production of which much expensive material, in experiment, has often been discarded after trial, to say nothing of the best years of life's activity, impossible of recall.

In my former article I referred to the fact of variation in adaptability, and I propose here to briefly state some of the causes and influences inducing the limitless diversity, as this condition is the foundation of the variation to which I have referred.

With the view of simplifying my explanation of these causes and influences, we will confine our consideration to a series of crosses made between two varieties only. I have repeatedly stated in conversation that I would not hesitate to repeat annually the same cross between two types of desirable character, without fear of producing duplicates as the result of these frequently repeated crosses, and the following remarks will make clear my reasons for this statement.

There are three great causes influencing this tendency to great diversity, and when each of these is sub-divided into innumerable subsidiary influences, we can readily realize the possibilities to which I refer. The first of these primary causes is the influence of heredity as affecting the chemical composition of the variety. The second, the varying conditions in the composition, quality, maturity and potency of the pollen at each cross, thereby making fertilization by two grains of identical properties practically impossible, and the third is the influence of the diverse conditions of age, health and vigor upon the product of such crosses.

It is not difficult for us to agree upon the effects of the first stated cause, because contact with every hybrid form in the plant or animal kingdom bears evidence of this influence, and here, even with the most limited experience, we learn that the proportion of diversity is increased by the multiplication of crosses entering into the composition of the parents, and this proportion is more greatly increased by the use of parents made up from the largest number of crosses.

I have referred to the influence of such crosses upon the chemical composition of the hybrid plant and will give here the most direct evidence of this fact by one example. Those who noticed my newest hybrids at the Pan-American Exposition will remember many of the most intense and dark colors ever exhibited. We cannot point to such rich, velvety, and pansy-like combinations in any of the species, yet the offspring of several distinct types, when blended by judicious selection, have produced flowers of such richness and intensity of coloring, that when their petals are

crushed they stain like analine dye. Such a result could only be produced by a combination of chemical influences more easily illustrated than explained.

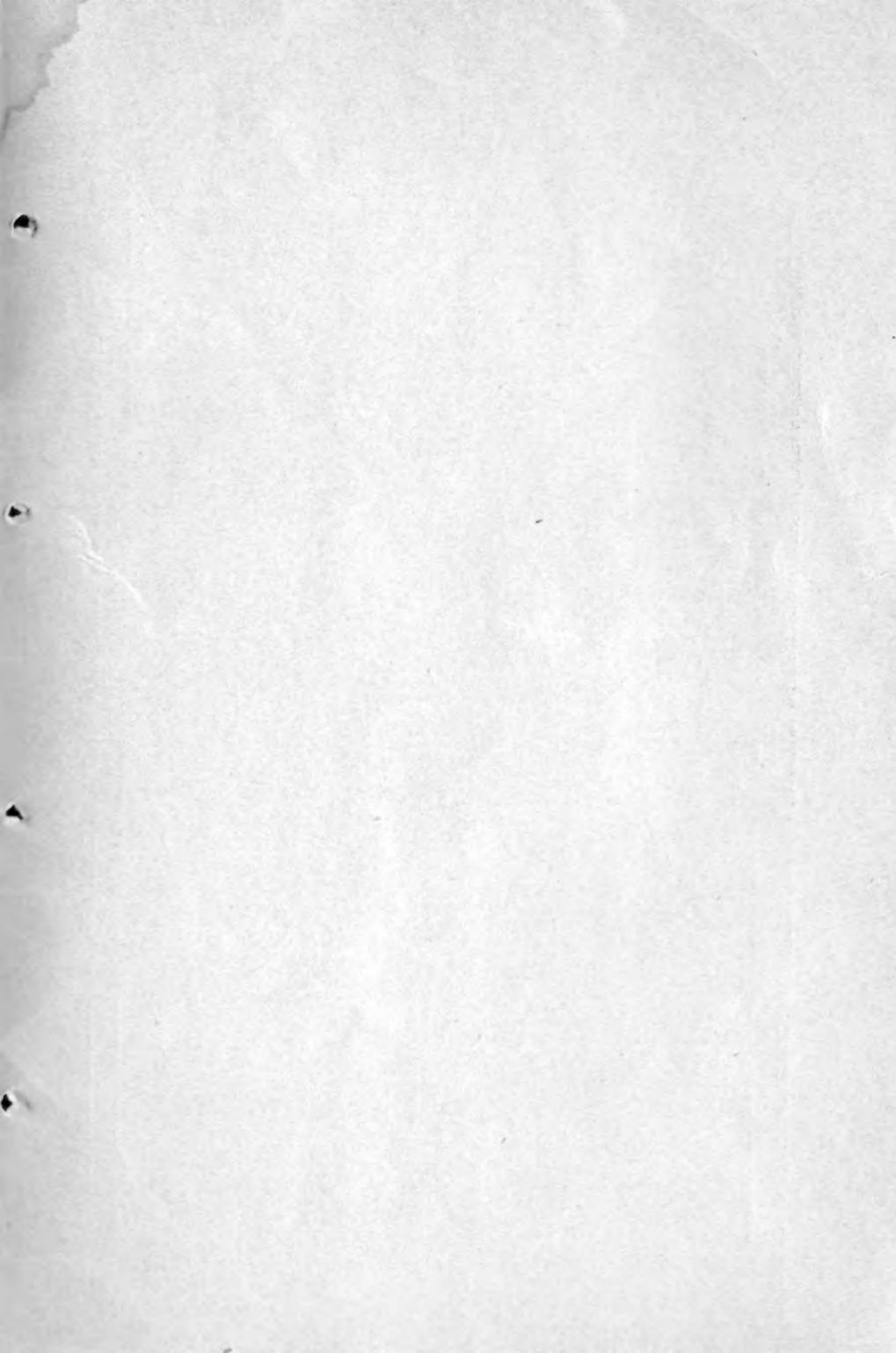
In the second of the three chief causes of diversity, assuming that each ovule is fertilized by a single grain of pollen, it is not difficult to appreciate the practical impossibility of two grains of identical qualities effecting fertilization, when we know that hundreds of grains fall upon the stigma in such varying conditions of maturity and vigor that no two periods of crossing would be likely to find the same atom were the production of duplicate atoms possible—in the most favorable condition to successfully contend against its fellows in the race for the objective point. But even assuming that such were available we are likely to be met, at the various times of operation, by such varying degrees in the receptive condition of the stigma as to interpose an insurmountable obstacle to the successful advancement of our preference, and this varying condition of the stigma is not only influenced by the hour of the day which we select for the work, but by the diverse weather conditions existing at the time, which continually affect the situation for a period extending over from one to three days. This reasoning must commend itself as sound when we see that no two moments extending over an average of twenty-four working hours is likely to present conditions so identical as to make duplicateure of variety possible by selection, if such were the object of the operator.

Having considered two of the predisposing causes of diversity in the hybrid plant, we may now consider the third series of influences affecting the offspring of the two selected varieties; age, health and vigor of each and every parent on both sides. Suppose, for example, we select one hundred plants on each side, of two varieties, could anything be more impossible than to find exact duplicates of the desired conditions on each side, and successfully balance these conditions with the view of producing a perfectly adjusted organism by select cross-fertilization? Such a thing is impossible and would be worse than absurd to attempt it.

In considering briefly these influences of parentage on the product of such crosses, we will find that the tendency is toward the most potent of each of the one hundred examples or combinations of two hundred units, ranging from the most extreme influence of the pollen parent on the one side and graduated up to the point of balance until overcome by the greater potency of the seed parent, thus covering every intermediate grade of condition of vital forces with first a leaning toward the peculiarities of the one parent, and then an apparent intermediate condition of varying degrees of neutralization, until overcome by the greater strength of the other, the effect is repeated to the opposite extreme with all its intermediate influences on the offspring. If, however, these parents have been selected with a proper knowledge of their qualities, frequent breaks will appear in the character of their offspring, opening up new fields of promise, and leading the operator onward, ever onward, through the years of his activity, with ever increasing and multiplying results upon which no limitations can be placed, until he ceases to make use of his yearly increasing opportunities for further and greater advancement. And if such breaks may be expected from the offspring of two varieties only, how much more numerous will be the results of this character when the use of parents diverse beyond powers of description is increased "ad infinitum."

Having endeavored to illustrate the impossibility of producing duplicates by a series of crosses between two varieties, and limiting our example to one hundred individuals of one variety on each side, which may with every propriety be increased to thousands, thereby materially increasing the strength of my contention, how great must be the influence toward still greater diversity when we make these crosses between many thousands of varieties, each possessing some special individuality of a much more distinct character than existed between the two varieties referred to in my example.

In view of the foregoing I therefore contend that as we multiply hybrids without limit—as we should do—thereby increasing with their enhanced beauty and quality the tendency to greater variability in their performance under changed conditions: we should deal with the question of dissemination with a little of that great liberality with which our efforts have been rewarded. "Freely we have received—freely give." should be our motto, rather than striving to place limitations upon that which is ready to reward to over-flowing when liberated by modern methods, and the applied knowledge of scientific principles.



PRIZES AWARDED TO

**Groff's New
Hybrid
Gladioli**

Buffalo # # 1901

Pan-American Exposition Gold Medal

Pan-American Silver Vase, awarded
by Buffalo Florists' Club

Certificate of Merit, by Society of American
Florists and Ornamental Horticulturists

Thirteen First Prizes by Pan-American
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◆ A TOTAL OF ◆
Sixteen First Awards